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MEMORANDUM

To: Transportation Committee

Date: February 26, 2010

From: Joy Schaad, PE, Senior Transportation Planning Engineer

Re: Changes to Transportation Maintenance Costs and Inflation Rates for Fiscal Constraint

Highways

At the January 6th CMAP Transportation Committee meeting, several highway professionals offered to review the process and numbers used to produce the preliminary *GO TO 2040* highway maintenance cost estimate. An ad hoc committee of IDOT, Tollway, county and local highway professionals was convened and a reduction in estimated future roadway maintenance costs of \$24.3 billion (16%) was realized. The committee reconsidered the overall premise of how the "safe and adequate" level and "state of good repair" level of maintenance should be calculated and rejected the previous definitions for state of good repair as 90% of roads rated good to excellent and for the safe and adequate level as 70% rated good to excellent. The consensus was that the estimate of future maintenance cost should be based on actual current practice and that such would constitute the safe and adequate level. They unanimously felt that any stepping down of maintenance cycles or levels from today's practices would be unacceptable. Specific changes based on these experts' opinions were:

- Reduced frequencies for reconstruction, resurfacing, signal upgrades and signal modernization to reflect typical actual practice.
- Adjusted unit costs (some up and some down) where the committee consensus was higher or lower than previously research had identified.
- Removed "Interchanges" as a maintenance cost line item and clarified that, because all or nearly all of expressway interchanges that are reconstructed have major redesign work (reconfiguring for new traffic levels or for operational and/or safety improvements; usually adding lanes to ramps, adding ramps or reducing the number of ramps) all of the

interchanges' reconstruction costs should be accounted for in CMAP's analysis of "systematic improvements" costs.

- Reduced traffic signal costs to reflect the fact that many agencies do their signal retiming
 work in house and, as such, the costs are already counted in the local agency "operations"
 cost number.
- Reduced the percentage for estimating cost of engineering and environmental studies from 30% of project costs to 15% for resurfacing and traffic signal modernization projects.
- Checked that the number of roadway resurfacings was reduced appropriately for reconstructions that would take place within the plan period.

The committee concurred with the previous approach regarding:

- Most factors, methods and unit costs.
- Bridge cost numbers: considered increasing bridge cost numbers to include short span
 bridges that are not in the national bridge inventory (i.e. 20 ft and shorter), but after
 investigation of the volume and costs associated with the short span bridges, the group
 determined that the vast majority are culverts, not full bridges and are adequately
 accounted for in the unit costs of road reconstruction.
- Operations costs were reviewed, finding that actual recent and current county costs are roughly the same as used in the previous *GO TO 2040* estimate.

Transit

Through continued coordination with the RTA, costs for safe and adequate level of transit maintenance were re-developed by utilizing the projected capital funds available for each service board for year 2011-2014 from the 12-17-09 RTA adopted budget as a basis. This resulted in a \$1.7 billion increase (5.3%) over the previous estimate.

Inflation Rates

Federal planning requirements for "years of expenditure" estimates of costs are met by applying inflation rates for each year in the plan period. The current estimate of future highway expenditures applies a 3% rate of inflation in all years except 2012 through 2014 (2012 - 4%; 2013 - 6.5%; 2014 - 5.5%). The change from the previous versions of our expenditure calculations which applied a constant 3% inflation across the plan horizon, is based on a recent transportation specific analysis of construction prices in the article "Construction Economic Review & Highway Cost Escalation Forecast" in the December 2009 edition of ECONOMIC FORECASTING REVIEW, published by the Strategic Consulting Group of Parsons Brinckerhoff (Dr. Kumudu Gunasekera and Brad Ship authors).

The current estimate of future transit expenditures is based on capital funds available 2010-2014 information from 12-17-09 RTA adopted budget. Those amounts include the impacts of

inflation for years 2011 through 2014 and the 3% factor was applied through the remainder of the plan horizon.